AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of making an interconnect structure comprising:

providing ~~a conductive~~ an interconnect copper line in a dielectric trench, wherein the ~~conductive~~ the interconnect copper line is in contact with a cap layer;

depositing a sacrificial layer on the cap layer;

depositing an interlayer dielectric on the sacrificial layer;

forming a trench and a via in the interlayer dielectric, wherein the via bottom extends to the sacrificial layer; and

removing a portion of the cap layer and the sacrificial layer proximate to the bottom surface of the via, wherein the removed portions of the cap layer and the sacrificial layer deposit predominantly along the lower sidewalls of the via.

2. (canceled)

3. (original) The method of claim 1 further comprising depositing a barrier layer on upper and lower sidewalls and bottom surface of the trench and via in the interlayer dielectric.

4. (original) The method of claim 3 further comprising removing a portion of the barrier layer at the bottom surface of the via, wherein the removed portions of the barrier layer deposit predominantly along the lower sidewalls of the via.

5. (currently amended) The method of claim 1 wherein removing a portion of the cap layer and the sacrificial layer is conducted by ~~an~~ gaseous ion bombardment.

6. (original) The method of claim 3 further comprising depositing a metal liner or a seed layer in contact with the barrier layer.

7. (original) The method of claim 1 wherein the sacrificial layer is a material selected from the group consisting of silicon oxides, silicon nitrides, silicon carbides, tetrafluoro-poly-p-xylylene, poly(arylene ethers) and cyclotene

8. (original) The method of claim 1 wherein the sacrificial layer is a material selected from the group consisting of tantalum nitride, tantalum, titanium silicon nitride, titanium, tungsten nitride and tungsten.

9. (currently amended) The method of claim 1 wherein the provided ~~conductive~~ interconnect copper line and the cap layer are recessed in the dielectric trench.

10. (original) The method of claim 9 wherein the sacrificial layer is recessed in the dielectric trench.

11. (currently amended) The method of claim 10 further comprising planarizing the sacrificial layer to a top surface of the dielectric trench, whereby the deposited interlayer dielectric would contact the dielectric.

12. (withdrawn) An interconnect structure comprising:

a conductive line in a dielectric trench, wherein the conductive line is in contact with a cap layer;

a sacrificial layer on the cap layer; and

an interlayer dielectric with a via provided over the conductive line, wherein the lower sidewalls of the via contain removed portions of the sacrificial layer and cap layer.

13. (withdrawn) The method of claim 12 wherein the provided conductive line is selected from the group consisting of TaN, Ta, Ti, Ti(Si)N, Au, Ag, Ru, W, Cu, Al, and Al(Cu)x(Si)y.

14. (withdrawn) The interconnect structure of claim 12 further comprising a barrier layer on upper sidewalls of the via.

15. (withdrawn) The interconnect structure of claim 14 further comprising a metal liner or a seed layer in contact with the barrier layer and the removed portions of the sacrificial layer.

16. (withdrawn) The interconnect structure of claim 14 further comprising copper, aluminum, tungsten, gold, silver or an alloy thereof within the via of the interlayer dielectric.

17. (withdrawn) The interconnect structure of claim 12 wherein the sacrificial layer is a material selected from the group consisting of silicon oxides, silicon nitrides, silicon carbides, tetrafluoro-poly-p-xylylene, poly(arylene ethers) and cyclotene

18. (withdrawn) The interconnect structure of claim 12 wherein the sacrificial layer is a material selected from the group consisting of tantalum nitride, tantalum, titanium silicon nitride, titanium, tungsten nitride and tungsten.

19. (withdrawn) The interconnect structure of claim 12 wherein the conductive line and the cap layer are recessed in the dielectric trench.

20. (withdrawn) The interconnect structure of claim 19 wherein the sacrificial layer is recessed in the dielectric trench.

21. (withdrawn) The interconnect structure of claim 20 wherein the interlayer dielectric contacts the dielectric.

22. (withdrawn) The interconnect structure of claim 12 wherein the sacrificial layer is disposed between the interlayer dielectric and the dielectric.

23. (withdrawn) The interconnect structure of claim 12 wherein the sacrificial layer and the cap layer are disposed between the interlayer dielectric and the dielectric.

24. (new) A method of making an interconnect structure comprising:

providing an interconnect conductive line in a dielectric trench, wherein the conductive line is in contact with a cap layer, and the conductive line and the cap layer are recessed in the dielectric trench;

depositing a sacrificial layer on the cap layer;

depositing an interlayer dielectric on the sacrificial layer;

forming a trench and a via in the interlayer dielectric, wherein the via bottom extends to the sacrificial layer; and

removing a portion of the cap layer and the sacrificial layer proximate to the bottom surface of the via, wherein the removed portions of the cap layer and the sacrificial layer deposit predominantly along the lower sidewalls of the via.

25. (new) The method of claim 24 wherein the sacrificial layer is recessed in the dielectric trench.

26. (new) (original) The method of claim 24 further comprising depositing a barrier layer on upper and lower sidewalls and bottom surface of the trench and via in the interlayer dielectric.

27. (new) The method of claim 24 wherein removing a portion of the cap layer and the sacrificial layer is conducted by ~~an~~ gaseous ion bombardment.

28. (new) The method of claim 26 further comprising depositing a metal liner or a seed layer in contact with the barrier layer.

29. (new) The method of claim 24 further comprising planarizing the sacrificial layer to a top surface of the dielectric trench, whereby the deposited interlayer dielectric would contact the dielectric.